

Magneton Emission for Passive RADAR Spoofing

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Simon Edwards

Research Acceleration Initiative

Introduction

In addition to application for secure and jamming-resistant communication, magneton emissions may have application in the area of RADAR spoofing, particularly against so-called passive RADAR installations.

Abstract

Passive RADAR units designed to trigger the launch of interceptor missiles would likely have difficulty distinguishing between structured interference from a magneton emitter (*ibid.*) and a genuine RADAR return. Magnetron spoofing may be used to create the illusion of large numbers of individual objects and may be used to create the illusion of movement at any nominated velocity in order to best simulate authentic threats.

A series of magneton emitters (as described in 30 July 2024) may be emplaced at ground level at a spacing which is consistent with the typical spacing of drones in a drone swarm. With the knowledge of the location of one or more known RADAR sites, magneton emissions may be projected in the direction of those sites. From the perspective of those RADAR receivers, the false returns would appear to be coming from a different direction depending upon the strength of the emission. The strength of the emission would, naturally, influence the curvature of the magnetons and their angle of strike against the receiver. Any Radio Direction Finder would interpret a gradually shifting magneton-based interference as an authentic moving object emitting electromagnetism and would likely flag it as a drone approaching the installation. The alternation of the emissions could be designed to match emissions typical of a particular type of drone so as to make the illusion more convincing.

Conclusion

Genuine attacks are likely to be far more effective when launched immediately after spoofings. The ability to convincingly spoof passive RADAR detectors would result in the waste of defensive munitions by an adversary.